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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,044	10/28/2003	Mu-Hyun Kim	0091.1029	3882

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EXAMINER	
GARRETT, DAWN L	
ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,044	KIM ET AL.	
	Examiner	Art Unit	
	Dawn Garrett	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,9-11,24,26,27 and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,9-11,24,26,27 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2009 has been entered. The amendment filed March 25, 2009 has been entered. Claims 1, 24 and 30 were amended. Claims 4, 8, 12-23, 25, 28 and 29 are cancelled. Claims 1-3, 5-7, 9-11, 24, 26, 27, and 30 are pending.

2. The objection to claims 1, 24 and 30 set forth in the Office action mailed January 28, 2009 is withdrawn due to the amendment.

3. The rejection of claim 24 under 35 U.S.C. 102(b) as being anticipated by Wakimoto et al. (US 2001/0052751 A1) is withdrawn due to the amendment.

4. The rejection of claims 1-3, 5, 7, 9-11, 26, and 30 under 35 U.S.C. 103(a) as being unpatentable over Kwon et al. (EP 0 851 714) in view of Wakimoto et al. (US 2001/0052751 A1) is withdrawn due to the amendment.

5. The rejection of claim 27 under 35 U.S.C. 103(a) as being unpatentable over Kwon et al. (EP 0 851 714) in view of Wakimoto et al. (US 2001/0052751 A1) in further view of Fujita et al. (US 2003/0008224) is withdrawn due to the amendment.

6. The rejection of claims 1-3, 6, 7, 9, 11, 24 and 30 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Akai (US 2003/0045021) in view of Wakimoto et al. (US 2001/0052751 A1) is withdrawn due to the amendment.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Ikai et al. (Applied Physics Letter, Vol. 79, No. 2, 9 July 2001, pages 156-158). Ikai et al. exemplifies a device comprising two electrodes, organic layers comprised of NPD and of CF-X (identical to instant formula 26) and an emitting layer, which are all formed upon a substrate. The examiner notes claim 24 does not expressly require that the first electrode be immediately adjacent the substrate or that the first organic film layer be located immediately adjacent the first electrode. The use of the language "formed on" is broad and the claim language does not specifically require a specific arrangement of layers.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-3, 5, 7, 9-11, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al. (EP 0 851 714) in view of Ikai et al. (Applied Physics Letters, Vol. 79, No. 2, 9 July 2001, pages 156-158).

Kwon et al. disclose a donor film for forming an organic electroluminescence device comprising a base film (substrate film), a light-absorbing layer (photothermal conversion layer) and a transfer layer formed of a luminous material (see abstract). All of the adhesion properties set forth in claim 1 are considered to be inherent to the donor film. One purpose of a donor film is to adhere better to the substrate onto which it is transferred as compared to the substrate it is leaving. The process limitations in claim 1 are not significant, because the product, a donor film, is being claimed. Kwon discloses multi-layers of functional material for the EL device as the transfer layer (see page 8, lines 27-34). Kwon et al. discloses formula (1) for the transfer layer, which is identical to formula 1 of claim 3 with regard to the low molecular weight organic electroluminescent material (see page 4, lines 21-35). The transfer layer may further comprise hole transfer material and electron transfer material per claim 4 (see abstract). The hole transfer material may include formula (8), which is identical to Formula 14 of claim 5 (see page 6, lines 25-43). Kwon et al. further discloses 1, 3, 4-oxadiazole derivative as an electron transfer material per claim 7 (see page 6, lines 20-24).

Kwon et al. is silent with respect to reciting expressly forming a hole blocking layer as part of the functional layers of the transfer layer to form an operational EL device. Ikai et al. teaches, in analogous art, a light emitting device having a hole- and exciton-block layer comprised of a "starburst" perfluorinated phenylene compound (see abstract, page 156) specifically including compound "CF-X" (see Figure 1, page 157) that is identical to instant formula 26. With regard to claim 7, a layer of Alq_3 is disposed between the cathode and the hole blocking layer (and/or exciton blocking layer) of the Ikai et al. device (see Figure 1, page 157). It would have been obvious to one of ordinary skill in the art at the time of the invention to have

formed a donor substrate according to the teachings of Kwon et al. including EL device functional layers taught by Ikai et al. as transfer layer(s) for forming an EL device, because one would expect the inclusion of Ikai et al. functional layers to result in a highly efficient EL device. [The following is further noted: Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396). Accordingly, since applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.]

The Kwon et al. light absorbing layer (photothermal layer) is comprised of polymer containing carbon black, graphite or infrared absorbing dye (see page 4, lines 8-10) per claims 9 and 10. The base film (substrate film) is comprised of any transparent polymer including polyesters (see col. 4, lines 4-7). Kwon et al. further discloses a gas generating layer (see claim 15, page 18) with regard to claim 26. It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising all the recited components of a donor substrate for thermal transfer, because Kwon et al. teaches all the materials to form such

a substrate and one would expect to arrive at a donor substrate able to form a desired EL device for light emission.

11. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al. (EP 0 851 714) in view of Ikai et al. (Applied Physics Letter, Vol. 79, No. 2, 9 July 2001, pages 156-158) in further view of Fujita et al. (US 2003/0008224). Kwon et al. and Ikai et al. are relied upon as set forth above. Kwon et al. discloses a gas generating layer (see claim 15, page 18) with regard to claim 26, but fails to set forth the specific gas-generating compounds of claim 27. Fujita et al. teaches in analogous art an exemplary gas-generating layer comprising either PETN or TNT (see par. 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected either PETN or TNT as a gas-generating material of the gas-producing layer of the donor film taught by Kwon, because Fujita et al. teach PETN or TNT as gas-generating material in the art.

12. Claims 1-3, 6, 7, 9, 11, 24 and 30 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Akai (US 2003/0045021) in view of Ikai et al. (Applied Physics Letter, Vol. 79, No. 2, 9 July 2001, pages 156-158).

Akai discloses transfer donor films for organic electroluminescent devices (see abstract and par. 82). The donor film comprises a base film (substrate) formed of a polymer such as PET (see par 84) and an organic film (see par. 87). The organic film (transfer layer) comprises multiple layers (see par. 87-89). One of those layers of the organic film may be a light emitting layer comprising Alq_3 per Formula 1 of claim 3 (see par. 93). A further layer may comprise the following materials: CuPc (per claim 6) and oxadiazole compounds (per claim 7) (see par. 95

and 96). A light to heat conversion layer is formed on the base film per the photothermal film (see par. 86).

With regard to claims 1, 24 and 30, Akai does not expressly recite a "hole blocking layer" as one of the multiple layers to form an EL device. Ikai et al. teaches, in analogous art, a light emitting device may comprise a hole- and exciton-block layer comprised of a starburst perfluorinated phenylene compound (see abstract, page 156) specifically including compound "CF-X" (see Figure 1, page 157) that is identical to instant formula 26. It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a donor substrate including a hole blocking functional layer for forming an EL device, because one would expect the hole blocking layer to provide the benefit of increased electron movement and hole blocking function, which would provide efficient light emission, through the EL device to be formed by the donor substrate. It further would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a donor substrate according to the teachings of Akai using the EL device functional layers taught by Ikai et al. as the transfer layer(s) for forming an EL device, because one would expect the Ikai et al. functional layers as the transfer layer to result in a highly reliable EL device as desired by Ikai et al. [The following is further noted: Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396). Accordingly, since

applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.]

Response to Arguments

13. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached at (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dawn L. Garrett/
Primary Examiner, Art Unit 1794

May 22, 2009